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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,402	11/19/2003	Yong-Hyun Lee	1349.1330	5308
21171	7590	10/17/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			NICHOLSON III, LESLIE AUGUST	
			ART UNIT	PAPER NUMBER
			3651	

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/715,402	<b>Applicant(s)</b> LEE ET AL.	
	<b>Examiner</b> Leslie A. Nicholson III	<b>Art Unit</b> 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/9/2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.  
4a) Of the above claim(s) 6-21 and 30-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,22-29 is/are rejected.
- 7) ☒ Claim(s) 3 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/19/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

1. This is a first action on the merits of application 10/715402.

### ***Election/Restrictions***

2. Claims 6-21 and 30-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/9/2005.

### ***Claim Objections***

3. Claim 26 is objected to because there appears to be a grammatical error in line 6 of the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

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Claim 29 recites the limitation "the driving source" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 1 and 22 are rejected under 35 U.S.C. 102(a) as being anticipated by Hsu USPub 2004/0099090.

Regarding claim 1, Hsu discloses a similar driving apparatus of a multi-function machine including:

- A scanner unit (¶0003)
- A document transport part (81)
- A printer unit (¶0003)
- A carrier including a print head with an ink jet nozzle mounted thereon (¶0004)

The driving apparatus comprising:

- A driving motor (10)
- A scanner driving part (61) (¶0018)
- A printer driving part (62) (¶0018)
- A power switching part disposed with the driving motor, the scanner driving part, and the printer driving part (fig.1)

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Regarding claim 22, further comprising a swing gear train (30) disposed between the power switching part and the scanner driving part (fig.1).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 29, as best understood by the examiner (see ¶15), is rejected under 35 U.S.C. 102(b) as being anticipated by Chida USP 4,349,287.

Chida discloses a similar power switching apparatus comprising:

- A main clutch gear (8) movably disposed at a rotation axis and coupled to the driving source (1)
- First (3) and second (4) clutch gears rotatably disposed at the rotation axis
- A clutch spring (12)
- A compulsory power switching unit (C2/L53-57)

10. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Sugiyama USP 5,206,737.

Sugiyama discloses a similar power transmitting apparatus comprising (see ¶18):

- A swing gear (116) disposed at a first frame (132)
- A swing lever (92) formed of a V-shaped form and disposed coaxially with the swing gear

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- A pair of idle gears (108,110) (C7/L5-9) respectively disposed at both ends of the swing lever (fig.11)

11. Claims 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Arai JP 62016939.

Regarding claim 24, Arai discloses a similar power transmitting apparatus comprising:

- A swing gear (46) disposed at a first frame (fig.2,3)
- A swing lever (48) formed of a V-shaped form and disposed coaxially with the swing gear (fig.7)
- A pair of idle gears (51,52) respectively disposed at both ends of the swing lever

Regarding claim 25, Arai discloses

- A body comprising a V-shaped form and comprising an axis hole formed at a center thereof to receive a support axis of the swing gear (fig.7)
- Engaging projections formed at both ends of the body (fig.7)

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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13. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asano JP 01304974 in view of Hsu USPub 2004/0099090.

Asano discloses a similar driving apparatus comprising a driving motor (20), a first driving part (13), a second driving part (31), and a power switching part (fig.3) disposed with the first driving part, the second driving part, and driving motor. Asano does not expressly disclose the first and second driving part being that of a scanner and printer, nor does Asano disclose the driving apparatus being that of a multi-function machine which includes a scanner unit, a document transport part, a printer unit, or a carrier including a print head with an ink jet nozzle.

Hsu teaches a multi-function machine including a scanner unit and a printer unit (¶0003), a document transport part (81), a carrier including a print head with an ink jet nozzle mounted thereon (¶0004), and a driving apparatus comprising a driving motor (10), a scanner driving part (61), and a printer driving part (62) (¶0018) for the purpose of providing the option to power either the scanner unit or printer unit.

At the time of invention it would have been obvious to one having ordinary skill in the art to employ a driving apparatus in a multi-function machine including a scanner unit and a printer unit, a document transport part, a carrier including a print head with an ink jet nozzle mounted thereon, and a driving apparatus comprising a driving motor, a scanner driving part, and a printer driving part for the purpose of providing the option to power either the scanner unit or printer unit.

Regarding claim 2, Asano discloses a first clutch (22) disposed with the driving motor, the scanner driving part (12), and the printer driving part, and a first actuating lever (30) disposed on a moving path of the carrier (abstract).

14. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe USP 4,649,437 in view of Takahashi USP 5,365,256.

Watanabe discloses a similar driving apparatus of a multi-function machine including a scanning unit (6), a document transport part (20), a printer unit (16) and the driving apparatus comprising a driving motor (35), a scanner driving part (35a), a printer driving part (51), and a power switching part disposed with the driving motor (C1/L30-43), the scanner driving part, and the printer driving part, but does not expressly disclose the multi-function machine including a carrier including a print head with an ink jet nozzle mounted thereon.

Takahashi teaches a carrier including a print head with an ink jet nozzle mounted thereon (C3/L11-13, C6/L21) for the purpose of facilitating a more effective method of printing.

At the time of invention it would have been obvious to one having ordinary skill in the art to employ a carrier including a print head with an ink jet nozzle mounted thereon, as taught by Takahashi, in the device of Watanabe for the purpose of facilitating a more effective method of printing.



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15. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu USPub 2004/0099090 in view of Sugiyama USP 5,206,737.

Hsu discloses all the limitations of the claim but does not disclose a first frame, a second frame, wherein the swing gear train comprises a swing gear disposed at the first, a swing lever formed of a V-shaped form and disposed coaxially with the swing, or a pair of idle gears respectively disposed at both ends of the swing lever.

Sugiyama teaches a first frame (132), a second frame (100,104), wherein the swing gear train comprises a swing gear (116) disposed at the first frame, a swing lever (92) formed of a V-shaped form and disposed coaxially with the swing, and a pair of idle gears (108,110) (C7/L5-9) respectively disposed at both ends of the swing lever (fig.11) for the purpose of selectively transmitting torque to one of two gears (C2/L38-44).

At the time of invention it would have been obvious to one having ordinary skill in the art to employ a first frame, a second frame, wherein the swing gear train comprises a swing gear disposed at the first frame, a swing lever formed of a V-shaped form and disposed coaxially with the swing, and a pair of idle gears respectively disposed at both ends of the swing lever, as taught by Sugiyama, in the device of Hsu, for the purpose of selectively transmitting torque to one of two gears.

16. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai JP 62016939 in view of Hoshino USP 4,700,437.

Arai discloses all the limitations of the claim (see ¶11), but does not expressly disclose each of the engaging projections comprising a cutting portion formed to be cut

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in a given width at a center of the engaging projection or an anti-escaping jaw disposed at an upper portion of the engaging projection and having a top end rounded off in a direction that a corresponding one of the idle gears is inserted and an angled bottom end.

Hoshino teaches each of the engaging projections (40) comprising a cutting portion (42) formed to be cut in a given width at a center of the engaging projection and an anti-escaping jaw disposed at an upper portion of the engaging projection and having a top end rounded off in a direction that a corresponding one of the objects is inserted and an angled bottom end (fig.2) for the purpose of adjusting the height of the object relative to the base (C5/L37-62).

At the time of invention it would have been obvious to one having ordinary skill in the art to have each of the engaging projections comprise a cutting portion formed to be cut in a given width at a center of the engaging projection and an anti-escaping jaw disposed at an upper portion of the engaging projection and having a top end rounded off in a direction that a corresponding one of the objects is inserted and an angled bottom end, as taught by Hoshino, in the device of Arai, for the purpose of adjusting the height of the object relative to the base.

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17. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai JP 62016939 in view of Borisoff USP 4,643,069.

Regarding claim 27, Arai discloses all the limitations of the claim (see ¶11) but does not expressly disclose the apparatus comprising elastic members disposed between the idle gears and the swing lever.

Borisoff teaches elastic members (51) disposed between the idle gears and the swing lever for the purpose of biasing the gear away from the swing lever (fig.3) (C2/L64-66).

At the time of invention it would have been obvious to one having ordinary skill in the art to dispose elastic members between the idle gears and the swing lever, as taught by Borisoff, in the device of Arai, for the purpose of biasing the gear away from the swing lever.

Regarding claim 28, Arai discloses all the limitations of the claim (see ¶9) but does not expressly disclose each of the elastic members formed of a leaf spring supported around each corresponding engaging projection.

Borisoff teaches each of the elastic members formed of a leaf spring (51) supported around each corresponding engaging projection (fig.3) for the purpose of biasing the gear away from the swing lever (C2/L64-66).

At the time of invention it would have been obvious to one having ordinary skill in the art to have each of the elastic members formed of a leaf spring supported around each corresponding engaging projection, as taught by Borisoff, in the device of Arai, for the purpose of biasing the gear away from the swing lever.

***Examiner's Note***

18. The recitation in the preamble of claim 24 "...connecting to a first gear train mounted on a first frame with a second gear train mounted on a second frame adjacent to the first frame..." relates only to a possible or intended use of the device being claimed, but does not further structurally limit the device.


***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie A. Nicholson III whose telephone number is 571-272-5487. The examiner can normally be reached on M-F, 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
GENE O. CRAWFORD  
SUPERVISORY PATENT EXAMINER

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